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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,063

06/29/2005

Koji Utsugi

8017-1172

3808

466

7590

08/11/2010

YOUNG & THOMPSON

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Alexandria, VA 22314

EXAMINER

ENIN-OKUT, EDU E

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

08/11/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,063	<b>Applicant(s)</b> UTSUGI ET AL.	
	<b>Examiner</b> Edu E. Enin-Okut	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**ELECTROLYTE SOLUTION FOR SECONDARY BATTERY**  
**AND SECONDARY BATTERY USING SAME**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 22, 2010 has been entered. Applicant has amended claim 13. Claim 13 is pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

3. The rejection of claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Armand (US 4,818,644) is withdrawn because claim 13 was amended. (*Examiner's Note:* It is noted that applicant states that "the terms "fluoroalkylene group", "fluoroalkyl group" and "fluoroalkoxy group" represent corresponding alkylene group, alkyl group and alkoxy group, respectively, in which a part of the hydrogen atoms bonded to carbon atom are substituted with fluorine atom(s); and, "the term "substituted" in "substituted fluoroalkylene group", "substituted fluoroalkyl group" and "substituted fluoroalkoxy group" represents that at least one of the hydrogen atoms bonded to carbon atom is substituted with an atom or a functional group other than fluorine", on page 12 of the instant specification.)

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

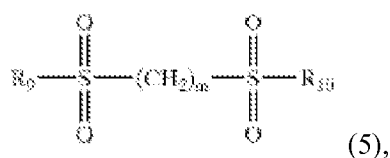
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 13 is rejected under 35 U.S.C. 102(a) and 35 U.S.C. 102(b) as being anticipated by Julji et al. (JP 09-301981 A; refer to JPO Abstract and machine translation).

*Regarding claim 13*, Julji teaches an electrolyte, useful in a battery, that includes an organic solvent, a lithium salt, and a methanetrisulfonic acid derivative, such as a compound represented by the following formula:  $\text{HC}(\text{SO}_2\text{OCH}_2\text{CF}_3)_3$  (Abstract; machine translation, Claim 2, para. 6, 10).

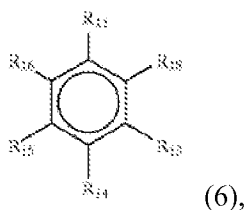
6. Claim 13 is rejected under 35 U.S.C. 102(a) and 35 U.S.C. 102(e) as being anticipated by Lim et al. (US 2004/0214091).

*Regarding claim 13*, Lim teaches an electrolyte for a battery that includes a non-aqueous organic solvent, a lithium salt and an additive compound represented by the following formula (5):



where R9 and R10 are independently selected from selected from the group consisting of an alkyl and an aromatic hydrocarbon of the following formula (6) (if either of R9 and R10 is an alkyl, the other one is essentially an aromatic hydrocarbon of the following formula (6)), and m is a integer of 0 to 3, preferably 1 to 2 (Abstract; para. 12, 17); and,

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where R11 and R16 are independently selected from the group consisting of hydrogen, halogen, alkyl, alkoxy, hydroxy, and carboxyl (para. 18).

7. Claim 13 is rejected under 35 U.S.C. 102(a) and 35 U.S.C. 102(e) as being anticipated by Adachi et al. (WO 2004/072021; refer to US 7,482,302 as an English translation).

*Regarding claim 13*, Adachi teaches a non-aqueous electrolyte solution, useful in batteries, including an alkali metal salt and a compound or salt, such as those represented by the following formulas:  $R-S(=O)_n-CF_2-SO_3H$  (1), and,  $R-S(=O)_n-CF_2-SO_2X$  (3) (where R is a group bound to an adjacent sulfur atom through a carbon atom, examples of R being an optionally substituted alkyl group, an optionally substituted haloalkyl group, an optionally substituted alkenyl group, an optionally substituted haloalkenyl group, an optionally substituted alkynyl group, an optionally substituted haloalkynyl group, an optionally substituted cycloalkyl group, etc.; n is 1 or 2; and, X is a halogen atom) (Abstract; 2:21-48, 4:5-6, 4:15-10:63, 14:55-15:28).

### ***Double Patenting***

8. The provisional rejection of claim 13, on the ground of nonstatutory obviousness-type double patenting, as being unpatentable over claims 1 and 12 of copending Application No. 10/582,855 is maintained. The rejection is repeated below.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application claims an electrolyte additive. The disclosure of the instant application differs from Application No. 10/582,855 in that the instant application does not teach the use of the

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additive in a secondary battery. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the additive in a lithium secondary battery to improve its capacity retention ratio and suppress an increase of resistance during storage (see instant application disclosure, para. 32).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

9. Applicant's arguments, filed January 22, 2010, with respect to the rejection(s) of claim 13 using the Armand reference have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made as presented above.

### ***Conclusion***

10. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Michot et al. (US 6,620,546) teaches ionic compositions having a high ionic conductivity comprising a salt with a delocalized anionic charge with use as an electrolyte in electrochemical devices, as catalyst of chemical reactions, or as photochemical or thermochemical initiator for polymerization or crosslinking reactions (Abstract). Martyak et al. (WO 2004/101860) teaches a high purity sulfonic acid and their use in electrochemical processes, including batteries

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Edu E. Enin-Okut** whose telephone number is **571-270-3075**. The examiner can normally be reached on Monday to Thursday, 7 a.m. - 3 p.m. (EST).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edu E. Enin-Okut/  
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 1795